

## Claims

- 1                   1.     An electro-optic assembly comprising first and second  
2 substrates, and an adhesive layer and a layer of electro-optic material disposed  
3 between the first and second substrates, the adhesive layer comprising a mixture of a  
4 polymeric adhesive material and an additive selected from a salt, a polyelectrolyte, a  
5 polymer electrolyte, a solid electrolyte, and combinations thereof.
- 1                   2.     An electro-optic assembly according to claim 1 wherein the  
2 adhesive layer comprises a mixture of the polymeric adhesive material and a salt.
- 1                   3.     An electro-optic assembly according to claim 2 wherein the salt  
2 comprises potassium acetate.
- 1                   4.     An electro-optic assembly according to claim 2 wherein the salt  
2 comprises a quaternary ammonium salt.
- 1                   5.     An electro-optic assembly according to claim 4 wherein the salt  
2 comprises a tetraalkylammonium salt.
- 1                   6.     An electro-optic assembly according to claim 5 wherein the salt  
2 comprises tetrabutylammonium chloride or hexafluorophosphate.
- 1                   7.     An electro-optic assembly according to claim 1 wherein the  
2 polyelectrolyte comprises a salt of a polyacid.
- 1                   8.     An electro-optic assembly according to claim 7 wherein the  
2 polyelectrolyte comprises an alkali metal salt of polyacrylic acid.
- 1                   9.     An electro-optic assembly according to claim 1 wherein the  
2 adhesive layer comprising the additive is provided with regions of differing colors and  
3 serves as a color filter.
- 1                   10.    An electro-optic assembly according to claim 1 wherein the  
2 adhesive layer comprising the additive further comprises an optical biasing element.
- 1                   11.    An electro-optic assembly according to claim 2 wherein the  
2 adhesive layer comprises from about  $10^{-6}$  to about  $10^{-4}$  moles of salt per gram of  
3 polymeric adhesive material.

1                   12.    An electro-optic assembly according to claim 11 wherein the  
2 adhesive layer comprises from about  $10^{-5}$  to about  $10^{-4}$  moles of salt per gram of  
3 polymeric adhesive material.

1                   13.    An electro-optic assembly according to claim 1 wherein the  
2 adhesive layer comprises a polyurethane.

1                   14.    An electro-optic assembly according to claim 1 wherein at least  
2 one of the first and second substrates comprises an electrode.

1                   15.    An electro-optic assembly according to claim 14 wherein each  
2 of the first and second substrates comprises at least one electrode.

1                   16.    An electro-optic assembly according to claim 14 wherein the  
2 first substrate comprises a light-transmissive electrically-conductive electrode, the  
3 second substrate comprises a release sheet, and the electro-optic medium is a solid  
4 electro-optic medium.

1                   17.    An article of manufacture comprising:  
2 a layer of a solid electro-optic medium having first and second surfaces  
3 on opposed sides thereof;

4 a first adhesive layer on the first surface of the layer of solid electro-  
5 optic medium;

6 a release sheet disposed on the opposed side of the first adhesive layer  
7 from the layer of solid electro-optic medium; and

8 a second adhesive layer on the second surface of the layer of solid  
9 electro-optic medium,

10 at least one of the first and second adhesive layers comprising a  
11 mixture of a polymeric adhesive material and an additive selected from a salt, a  
12 polyelectrolyte, a polymer electrolyte, a solid electrolyte, and combinations thereof.

1                   18.    An electro-optic assembly comprising first and second  
2 substrates, and an adhesive layer and a layer of electro-optic material disposed  
3 between the first and second substrates, the adhesive layer comprising a mixture of a  
4 polymeric adhesive material and an additive selected from a conductive metal powder,

5 a ferrofluid, a non-reactive solvent, a conductive organic compound, and combinations  
6 thereof.

1 19. An electro-optic assembly according to claim 18 wherein the  
2 conductive metal powder comprises nickel.

1 20. An article of manufacture comprising:  
2 a layer of a solid electro-optic medium having first and second surfaces  
3 on opposed sides thereof;

4 a first adhesive layer on the first surface of the layer of solid electro-  
5 optic medium;

6 a release sheet disposed on the opposed side of the first adhesive layer  
7 from the layer of solid electro-optic medium; and

8 a second adhesive layer on the second surface of the layer of solid  
9 electro-optic medium,

10 at least one of the first and second adhesive layers comprising a  
11 mixture of a polymeric adhesive material and an additive selected from a conductive  
12 metal powder, a ferrofluid, a non-reactive solvent, a conductive organic compound,  
13 and combinations thereof.

1 21. An electrophoretic medium comprising a plurality of capsules,  
2 each of the capsules comprising a capsule wall, a suspending fluid encapsulated within  
3 the capsule wall and a plurality of electrically charged particles suspended in the  
4 suspending fluid and capable of moving therethrough on application of an electric  
5 field to the medium, the medium further comprising a binder surrounding the capsules,  
6 the binder comprising a mixture of a polymeric adhesive material and an additive  
7 selected from a salt, a polyelectrolyte, a polymer electrolyte, a solid electrolyte and  
8 combinations thereof.

1 22. An electrophoretic medium according to claim 21 wherein the  
2 binder comprises a mixture of the polymeric adhesive material and a salt.

1 23. An electrophoretic medium according to claim 22 wherein the  
2 salt comprises potassium acetate.

- 1                   24.    An electrophoretic medium according to claim 22 wherein the  
2 salt comprises a quaternary ammonium salt.
- 1                   25.    An electrophoretic medium according to claim 24 wherein the  
2 salt comprises a tetraalkylammonium salt.
- 1                   26.    An electrophoretic medium according to claim 25 wherein the  
2 salt comprises tetrabutylammonium chloride or hexafluorophosphate.
- 1                   27.    An electrophoretic medium according to claim 21 wherein the  
2 polyelectrolyte comprises a salt of a polyacid.
- 1                   28.    An electrophoretic medium according to claim 27 wherein the  
2 polyelectrolyte comprises an alkali metal salt of polyacrylic acid.
- 1                   29.    An electrophoretic medium according to claim 21 wherein the  
2 binder comprising the additive further comprises an optical biasing element.
- 1                   30.    An electrophoretic medium according to claim 21 comprising  
2 from about  $10^{-6}$  to about  $10^{-4}$  moles of salt per gram of binder.
- 1                   31.    An electrophoretic medium according to claim 30 comprising  
2 from about  $10^{-5}$  to about  $10^{-4}$  moles of salt per gram of binder.
- 1                   32.    An electrophoretic medium according to claim 21 wherein the  
2 binder comprises a polyurethane.
- 1                   33.    An electrophoretic medium comprising a plurality of capsules,  
2 each of the capsules comprising a capsule wall, a suspending fluid encapsulated within  
3 the capsule wall and a plurality of electrically charged particles suspended in the  
4 suspending fluid and capable of moving therethrough on application of an electric  
5 field to the medium, the medium further comprising a binder surrounding the capsules,  
6 the binder comprising a mixture of a polymeric adhesive material and an additive  
7 selected from a conductive metal powder, a ferrofluid, a non-reactive solvent, a  
8 conductive organic compound, and combinations thereof.
- 1                   34.    An adhesive comprising a mixture of a polymeric adhesive  
2 material and an additive selected from a salt, a polyelectrolyte, a polymer electrolyte, a  
3 solid electrolyte, and combinations thereof.

1                   35.    The adhesive of claim 34 wherein the polymeric adhesive  
2 material is selected from a polyurethane, vinyl acetate, vinyl acetate ethylene, an  
3 epoxy, a polyacrylic-based adhesive, and combinations thereof.

1                   36.    An adhesive comprising a mixture of a polymeric adhesive  
2 material and an additive selected from a conductive metal powder, a ferrofluid, a non-  
3 reactive solvent, a conductive organic compound, and combinations thereof.

1                   37.    The adhesive of claim 36 wherein the polymeric adhesive  
2 material is selected from a polyurethane, vinyl acetate, vinyl acetate ethylene, an  
3 epoxy, a polyacrylic-based adhesive, and combinations thereof.